FIG.1

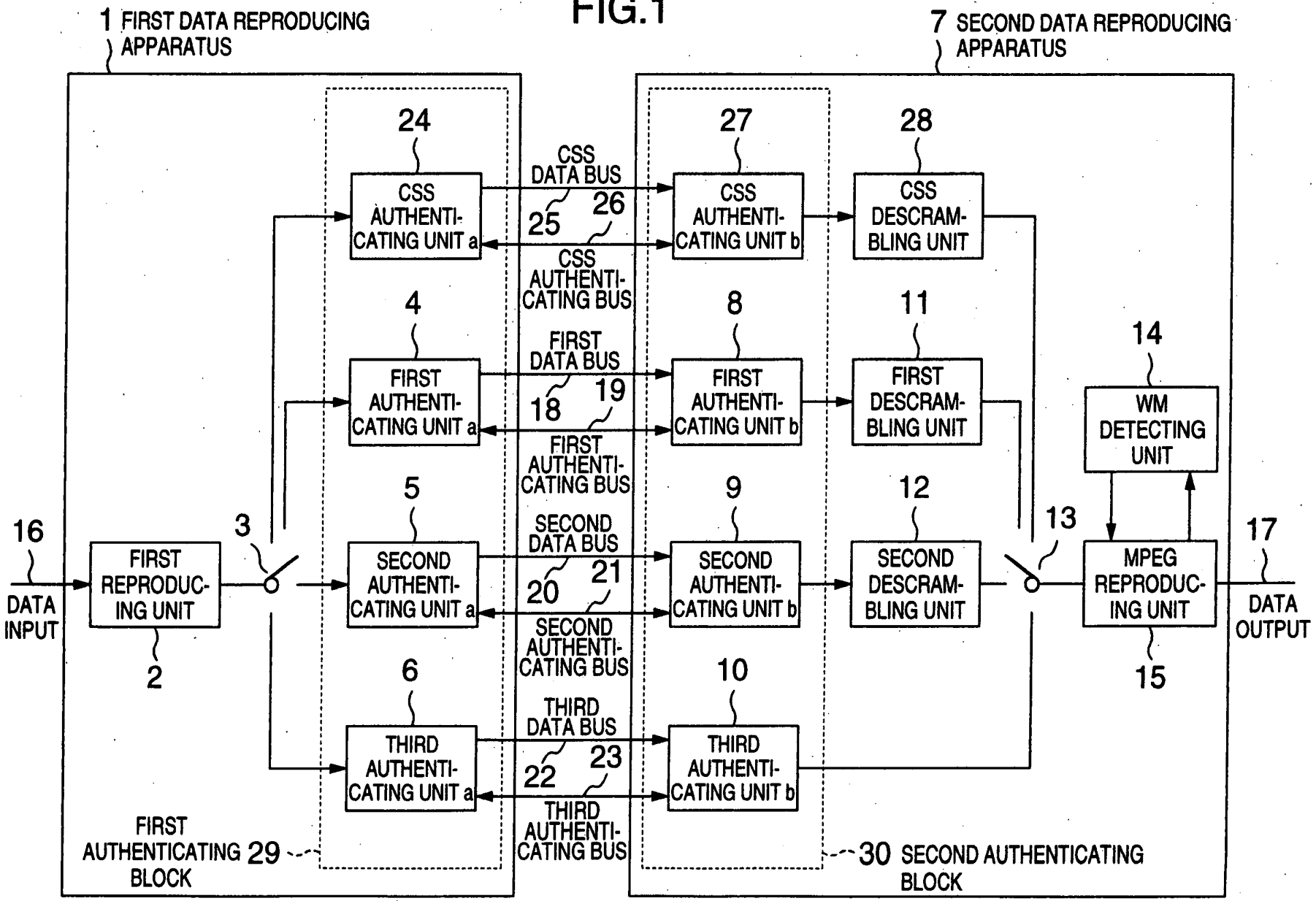

1 FIRST DATA REPRODUCING APPARATUS
7 SECOND DATA REPRODUCING APPARATUS
16
DATA INPUT
FIRST REPRODUC-ING UNIT
2
3
24
CSS AUTHENTI-CATING UNIT a
4
FIRST AUTHENTI-CATING UNIT a
5
SECOND AUTHENTI-CATING UNIT a
6
THIRD AUTHENTI-CATING UNIT a
CSS DATA BUS
25
26
CSS AUTHENTI-CATING BUS
FIRST DATA BUS
18
19
FIRST AUTHENTI-CATING BUS
SECOND DATA BUS
20
21
SECOND AUTHENTI-CATING BUS
THIRD DATA BUS
22
23
THIRD AUTHENTI-CATING BUS
27
CSS AUTHENTI-CATING UNIT b
8
FIRST AUTHENTI-CATING UNIT b
9
SECOND AUTHENTI-CATING UNIT b
10
THIRD AUTHENTI-CATING UNIT b
28
CSS DESCRAM-BLING UNIT
11
FIRST DESCRAM-BLING UNIT
12
SECOND DESCRAM-BLING UNIT
13
14
WM DETECTING UNIT
15
MPEG REPRODUC-ING UNIT
17
DATA OUTPUT
FIRST AUTHENTICATING BLOCK 29
30 SECOND AUTHENTICATING BLOCK

FIG.2

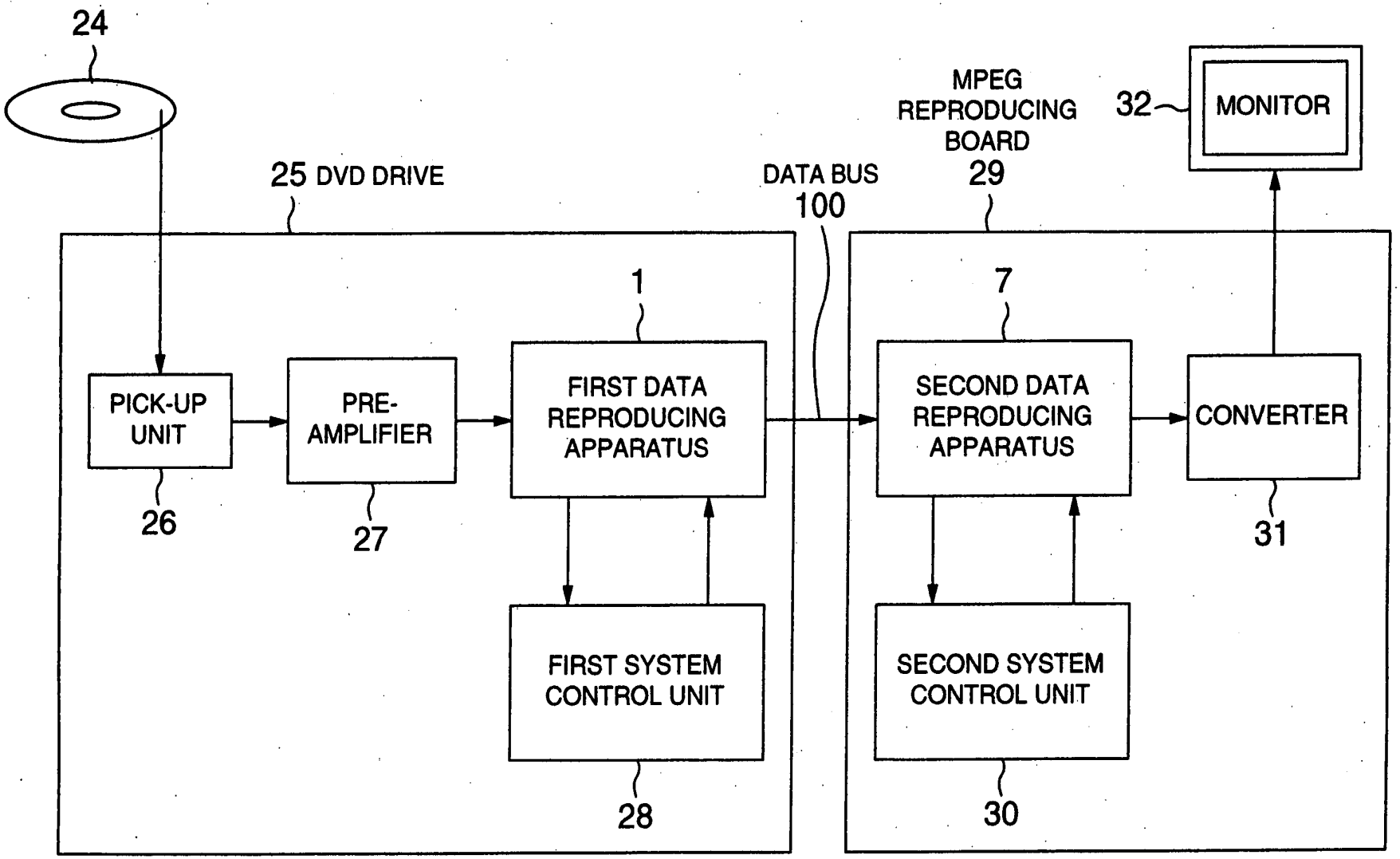

24
25 DVD DRIVE
DATA BUS
100
MPEG
REPRODUCING
BOARD
29
32
MONITOR
1
7
PICK-UP
UNIT
PRE-
AMPLIFIER
FIRST DATA
REPRODUCING
APPARATUS
SECOND DATA
REPRODUCING
APPARATUS
CONVERTER
26
27
31
FIRST SYSTEM
CONTROL UNIT
SECOND SYSTEM
CONTROL UNIT
28
30

FIG.3

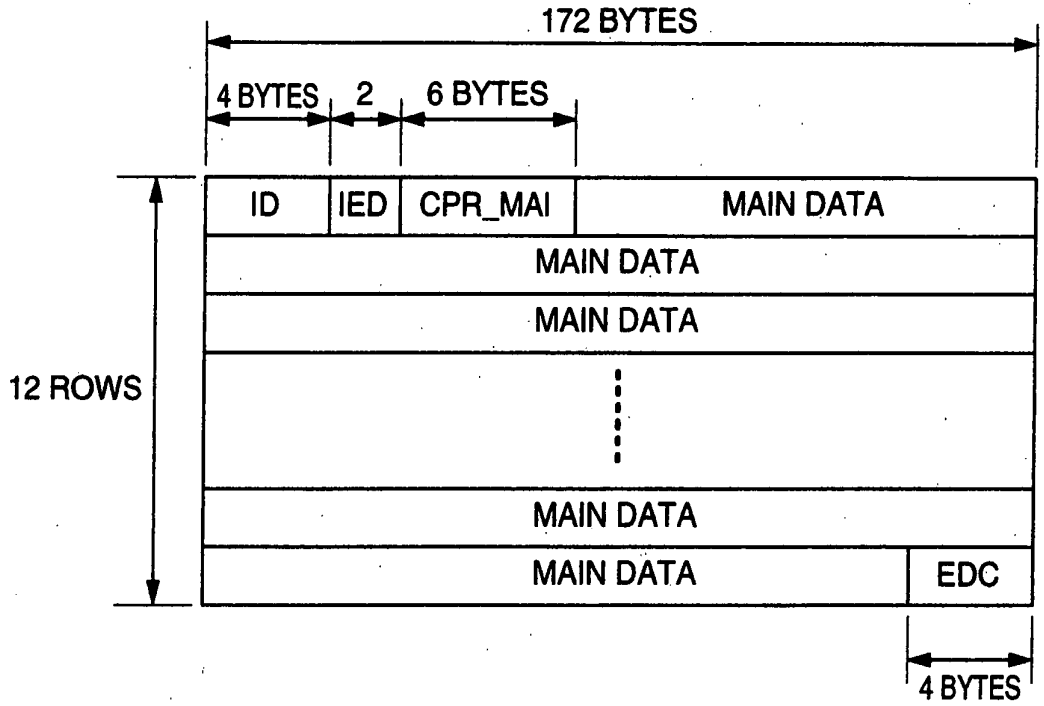

172 BYTES
4 BYTES
2
6 BYTES
ID
IED
CPR_MAI
MAIN DATA
MAIN DATA
MAIN DATA
12 ROWS
MAIN DATA
MAIN DATA
EDC
4 BYTES

FIG.4

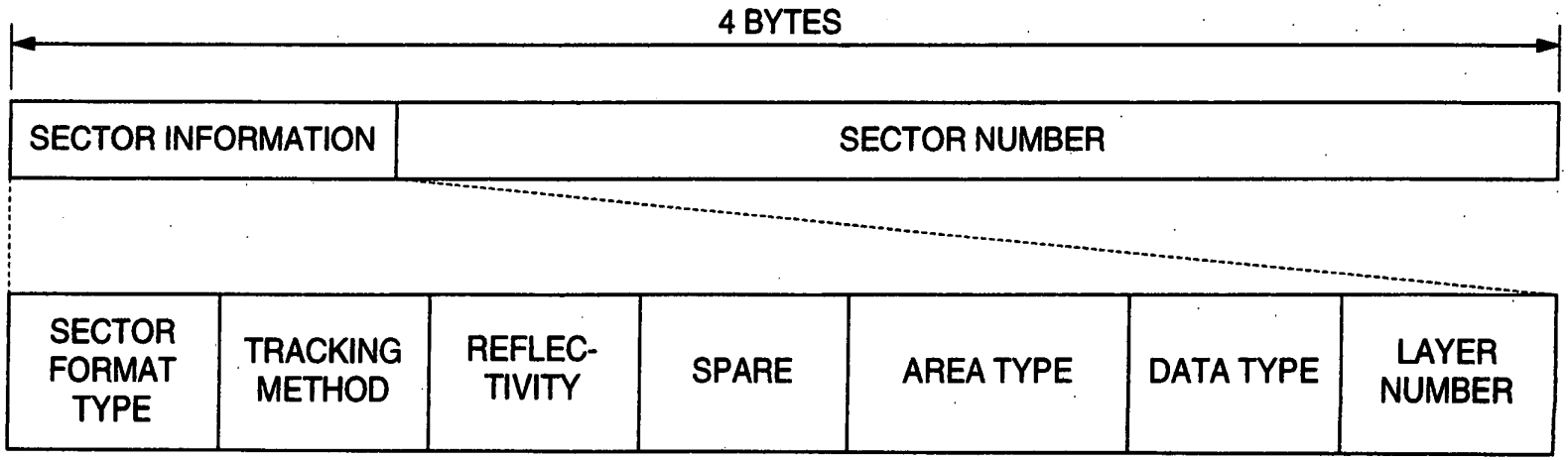

4 BYTES
SECTOR INFORMATION
SECTOR NUMBER
SECTOR FORMAT TYPE
TRACKING METHOD
REFLEC-TIVITY
SPARE
AREA TYPE
DATA TYPE
LAYER NUMBER

FIG.5

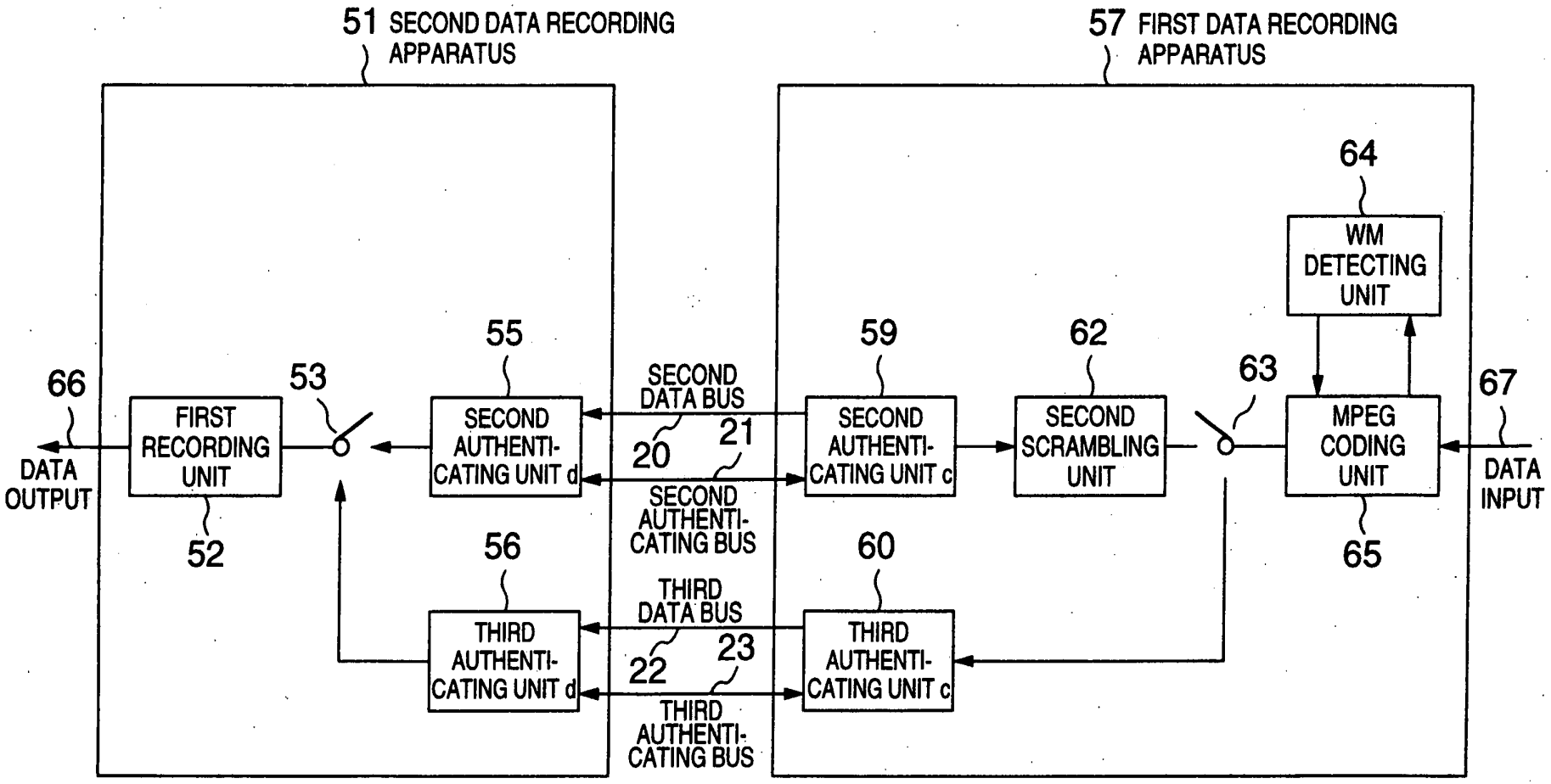

51 SECOND DATA RECORDING APPARATUS
57 FIRST DATA RECORDING APPARATUS
64
WM DETECTING UNIT
55
59
62
63
66
53
SECOND DATA BUS
67
FIRST RECORDING UNIT
SECOND AUTHENTI-CATING UNIT d
20
21
SECOND AUTHENTI-CATING UNIT c
SECOND SCRAMBLING UNIT
MPEG CODING UNIT
DATA OUTPUT
DATA INPUT
SECOND AUTHENTI-CATING BUS
52
56
60
65
THIRD DATA BUS
THIRD AUTHENTI-CATING UNIT d
22
23
THIRD AUTHENTI-CATING UNIT c
THIRD AUTHENTI-CATING BUS

FIG.6

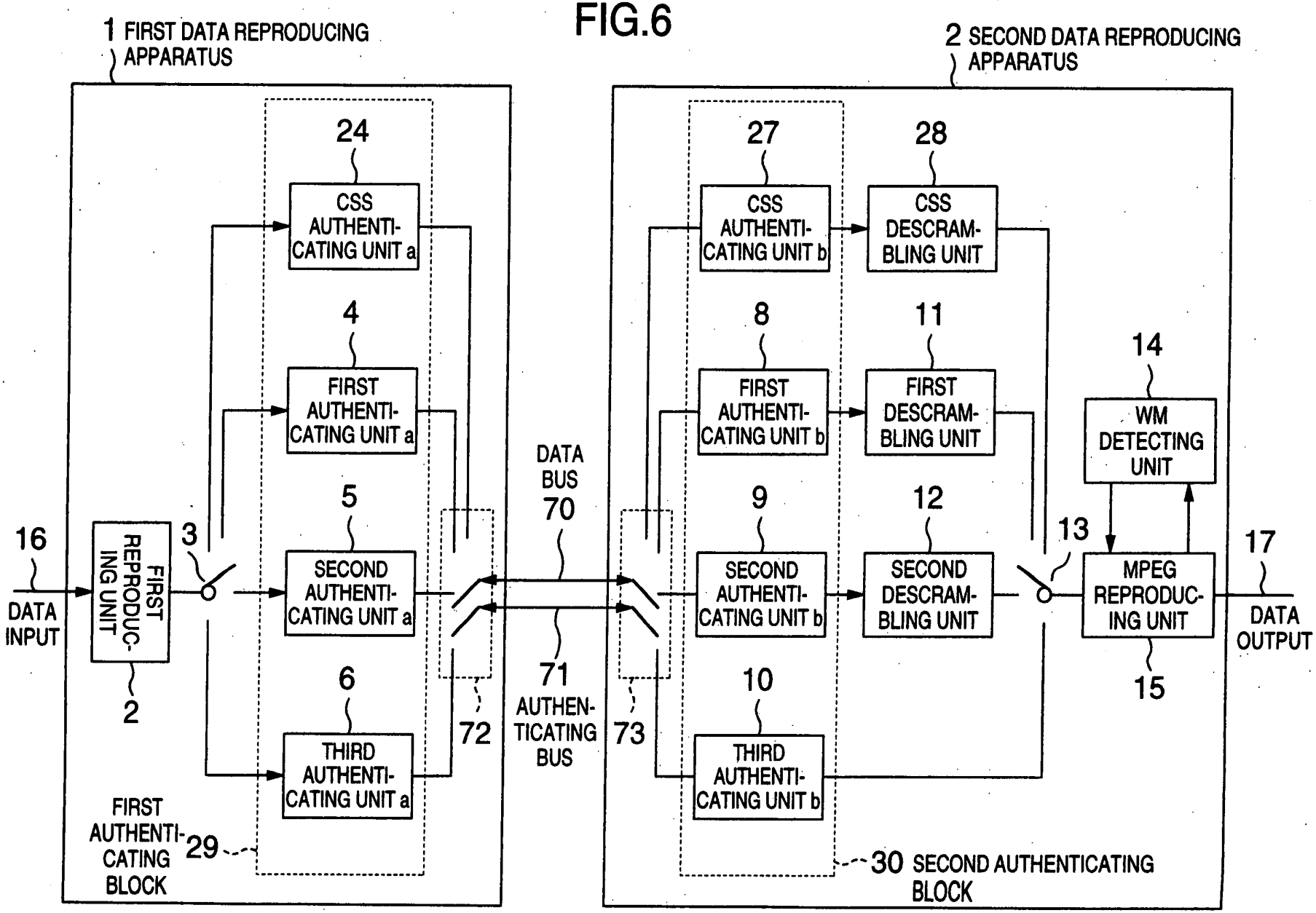

1 FIRST DATA REPRODUCING APPARATUS
2 SECOND DATA REPRODUCING APPARATUS
24
CSS AUTHENTI-CATING UNIT a
4
FIRST AUTHENTI-CATING UNIT a
5
SECOND AUTHENTI-CATING UNIT a
6
THIRD AUTHENTI-CATING UNIT a
16
DATA INPUT
FIRST REPRODUC-ING UNIT
2
3
FIRST AUTHENTI-CATING BLOCK
29
72
DATA BUS
70
71
AUTHEN-TICATING BUS
73
27
CSS AUTHENTI-CATING UNIT b
28
CSS DESCRAM-BLING UNIT
8
FIRST AUTHENTI-CATING UNIT b
11
FIRST DESCRAM-BLING UNIT
9
SECOND AUTHENTI-CATING UNIT b
12
SECOND DESCRAM-BLING UNIT
10
THIRD AUTHENTI-CATING UNIT b
14
WM DETECTING UNIT
13
MPEG REPRODUC-ING UNIT
15
17
DATA OUTPUT
30 SECOND AUTHENTICATING BLOCK

FIG.7

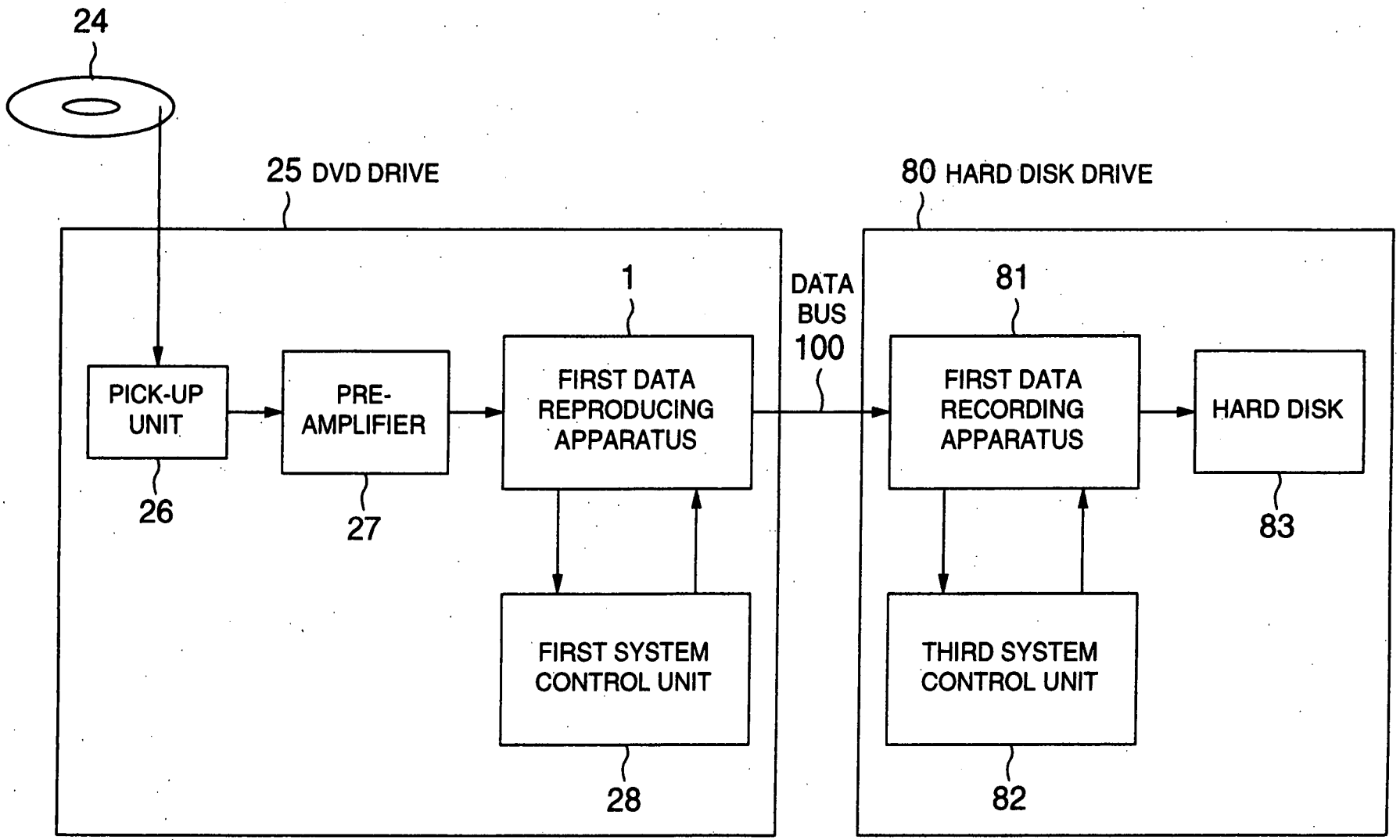

24
25 DVD DRIVE
80 HARD DISK DRIVE
1
81
DATA BUS 100
PICK-UP UNIT
PRE-AMPLIFIER
FIRST DATA REPRODUCING APPARATUS
FIRST DATA RECORDING APPARATUS
HARD DISK
26
27
83
FIRST SYSTEM CONTROL UNIT
THIRD SYSTEM CONTROL UNIT
28
82

FIG.8

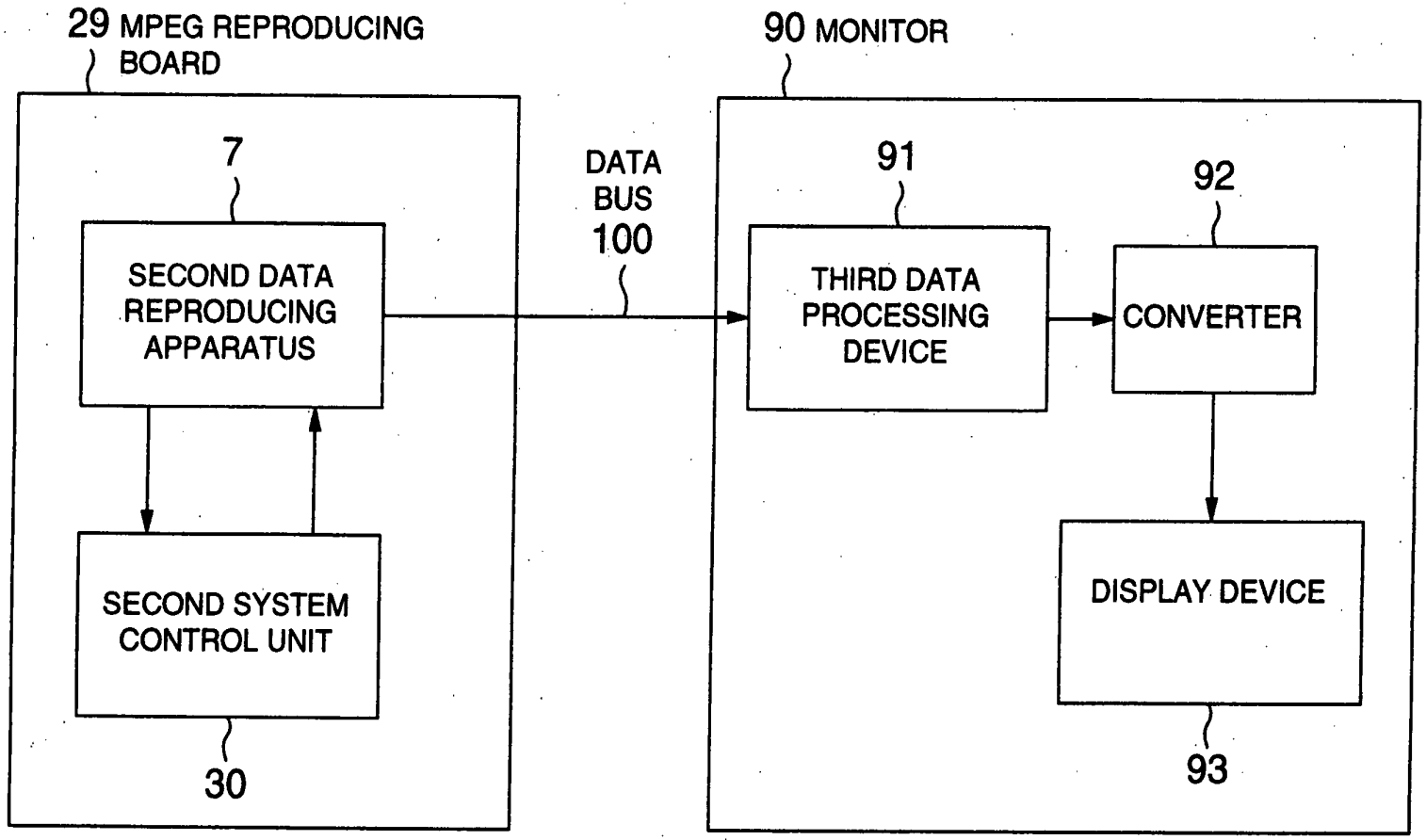

29 MPEG REPRODUCING BOARD
90 MONITOR
7
SECOND DATA REPRODUCING APPARATUS
DATA BUS 100
91
THIRD DATA PROCESSING DEVICE
92
CONVERTER
SECOND SYSTEM CONTROL UNIT
DISPLAY DEVICE
30
93

FIG.9

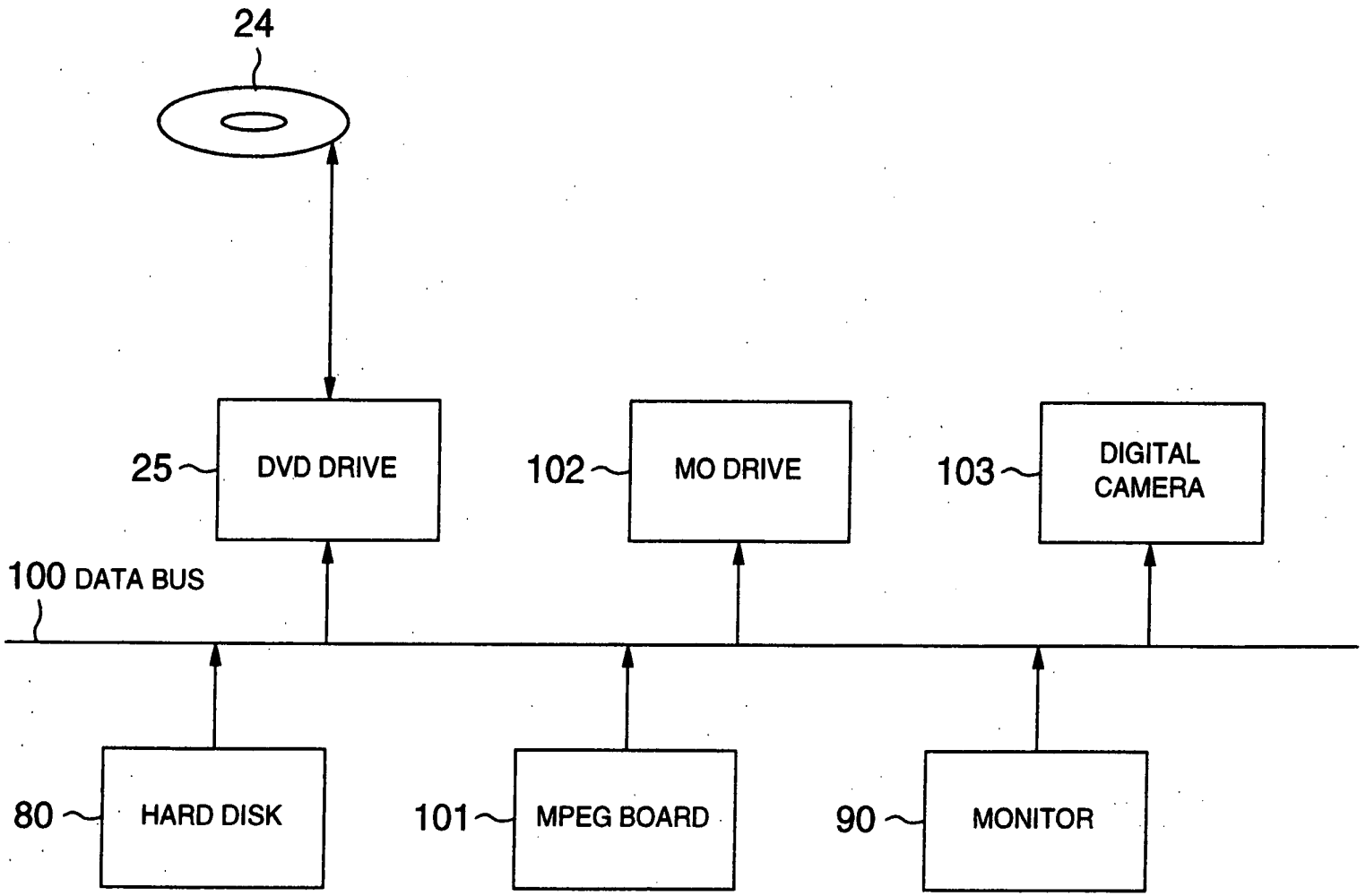
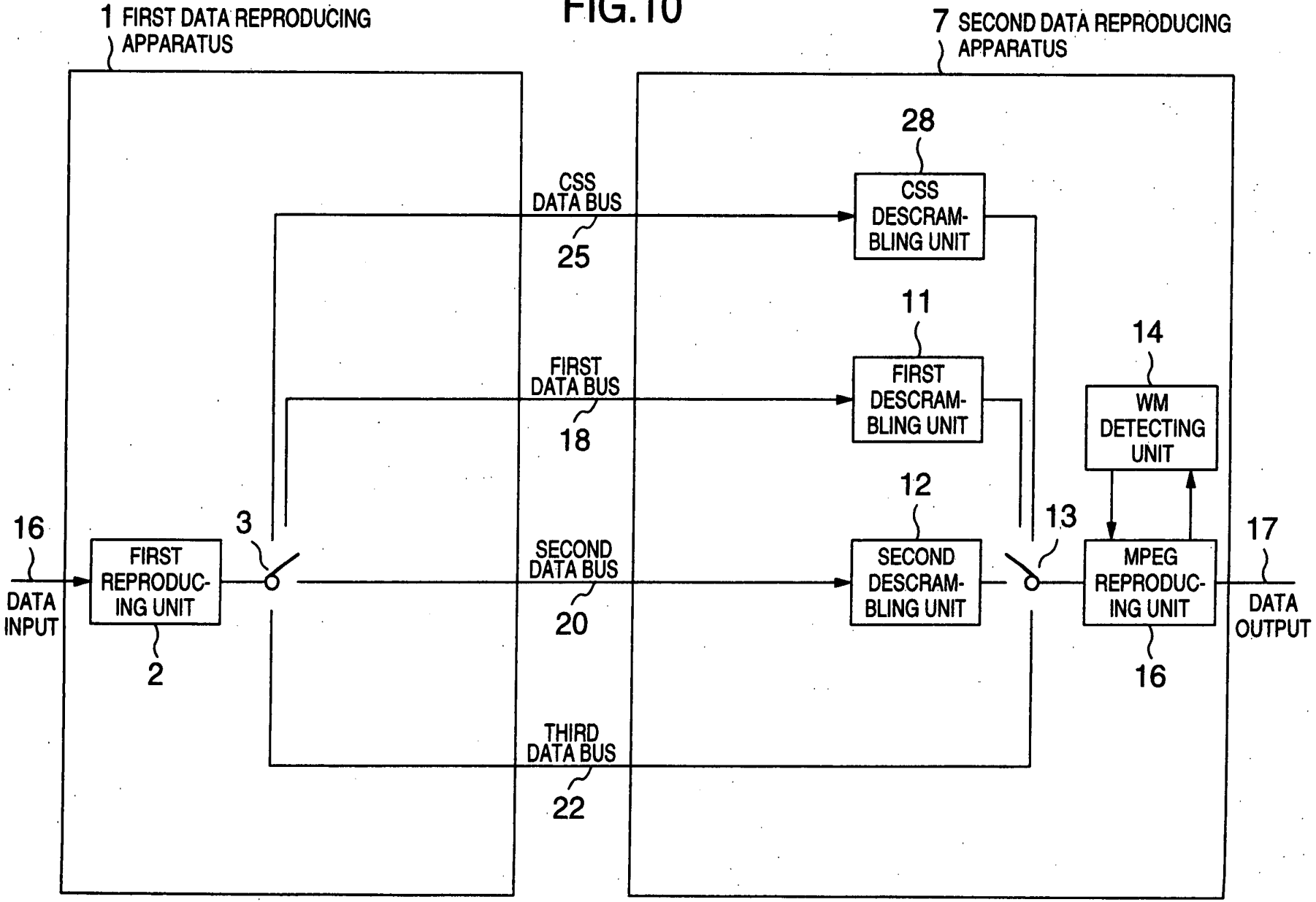

24
25
DVD DRIVE
102
MO DRIVE
103
DIGITAL CAMERA
100 DATA BUS
80
HARD DISK
101
MPEG BOARD
90
MONITOR

FIG.10


1 FIRST DATA REPRODUCING APPARATUS
7 SECOND DATA REPRODUCING APPARATUS
16
DATA INPUT
FIRST REPRODUC-ING UNIT
2
3
CSS DATA BUS
25
FIRST DATA BUS
18
SECOND DATA BUS
20
THIRD DATA BUS
22
28
CSS DESCRAM-BLING UNIT
11
FIRST DESCRAM-BLING UNIT
12
SECOND DESCRAM-BLING UNIT
13
14
WM DETECTING UNIT
MPEG REPRODUC-ING UNIT
16
17
DATA OUTPUT